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NOVEMBER 01, 2001

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RECORDATION DATE: 08/27/2001

REEL/FRAME: 012115/0428

NUMBER OF PAGES: 4

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

MALEKI, LUTFOLLAH

DOC DATE: 07/31/2001

ASSIGNOR:

YAO, XIAOTIAN S.

DOC DATE: 08/17/2001

ASSIGNOR:

ILCHENKO, VLADIMIR

DOC DATE: 08/22/2001

ASSIGNEE:

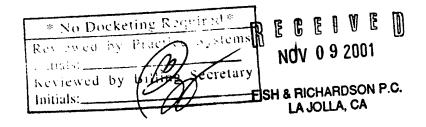
CALIFORNIA INSTITUTE OF TECHNOLOGY 1200 EAST CALIFORNIA BOULEVARD PASADENA, CALIFORNIA 91125

SERIAL NUMBER: 09816872

PATENT NUMBER:

FILING DATE: 03/22/2001

ISSUE DATE:



ALLYSON PURNELL, EXAMINER ASSIGNMENT DIVISION OFFICE OF PUBLIC RECORDS



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08-31-2001



MAR 28 2003

Substitute Form PTO-1595

Attorney Docket No.: 06618-605001 Client's Ref. No.: CIT 3188

Commissioner for Patents: Please record the attached original docum	nent(e) or reduitible?
	nemia) or copylics).
Name of conveying party(ies): Lutfollah Maleki, Xiaotian S. Yao and Vladimir Ilchenko Additional name(s) attached? □ Yes 図 No	2. Name and address of receiving party(ies): California Institute of Technology 1200 East California Boulevard Pasadena, CA 91125
3. Nature of conveyance: ☐ Assignment ☐ Merger ☐ Security Agreement ☐ Change of Name ☐ Other:	2. Name and address of receiving party(ies): California Institute of Technology 1200 East California Boulevard Pasadena, CA 91125 Additional names/addresses attached? Division Pasadena
Execution Date: July 31, 2001; August 17, 2001; and August 22, 2001	Additional names/addresses attached? ☐ Yes ☒ No
4. Application number(s) or patent number(s):	
If this document is being filed with a new application, the execution	on date of the application is:
A. Patent Application No(s).:	B: Patent No(s).:
09/816,872	-
·	│ attached? □ Yes 囯 No
Name/address of party to whom correspondence concerning	
document should be mailed:	Total number of applications/patents involved: 1
SCOTT C. HARRIS	7. Total fee (37 CFR §3.41): \$40
Fish & Richardson P.C.	☑ Enclosed
PTO Customer No. 20985	☐ Authorized to charge Deposit Account.
4350 La Jolla Village Drive, Suite 500 San Diego, California 92122	8. Deposit Account No.: 06-1050
Carr Biogo, Camornia 32722	Please apply any additional charges, or any credits, to our Deposit Account No. 06-1050.
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9. Statement and Signature: To the best of my knowledge and any attached copy is a true copy of the original docume	ent.
Ping Ai	
Bing Ai Reg. No. 43,312	August 23, 2001
Name of Person Signing Signature	Date Date
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	otal number of pages including coversheet, attachments and docum
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	t this correspondence is being deposited with the United States Postal Servi the date indicated below and is addressed to the Commissioner of Patents,

August 23, 2001
Date of Deposit

Norman Green
Typed Name of Person Signing Certificate

<u>ASSIGNMENT</u>

For valuable consideration, we, LUTFOLLAH MALEKI of Pasadena, California, XIAOTIAN S. YAO of Diamond Bar, California, and VLADIMIR ILCHENKO of La Canada, California, hereby assign to: California Institute of Technology, a non-profit corporation having a place of business at: 1200 East California Boulevard, Pasadena, CA 91125; and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title and interest throughout the world in the inventions and improvements which are subject of an application for United States Patent signed by us, entitled NON-SPHERICAL WHISPERING-GALLERY-MODE MICROCAVITY, filed March 22, 2001, and assigned U.S. Serial Number 09/816,872; this assignment including said application, any and all United States and foreign patents, utility models, and design registrations granted for any of said inventions or improvements, and the right to claim priority based on the filing date of said application under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes; and we authorize the Assignee to apply in all countries in our name or in its own name for patents, utility models, design registrations and like rights of exclusion and for inventors' certificates for said inventions and improvements; and we agree for ourselves and our respective heirs, legal representatives and assigns, without further compensation to perform such lawful acts and to sign such further applications, assignments, Preliminary Statements and other lawful documents as the Assignee may reasonably request to effectuate fully this assignment.

Date: 7/31/0/	L-Mil
	LUTFOLLAH MALEKI
Date:	XIAOTIAN S. YAO
ı	ALACIANS, IAC
Date:	VLADIMIR ILCHENKO

d 005

Attorney Docket No. 06618-605001/CIT3188

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LUTFOLLAH MALEKI
XIAOTIAN S. YAO
VLADIMIR ILCHENKO

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Attorney Docket No. 06618-605001/CIT3188

ASSIGNMENT

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Date:	LUTFOLLAH MALEKI
Date:	XIAOTIAN S. YAO
Date: 8/22/0/	BUJ — VLADIMIR ILCHENKO





UNITED STATES DEPARTMENT OF COMMERCE Patent and Trademark Office

ASSISTANT SECRETARY AND COMMISSIONER OF PATENTS AND TRADEMARKS Washington, D.C. 20231

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RECORDATION DATE: 06/18/2001

REEL/FRAME: 011920/0552

NUMBER OF PAGES: 5

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

ILTCHENKO, VLADIMIR

DOC DATE: 05/09/2000

ASSIGNOR:

MALEKI, LUTE

DOC DATE: 05/09/2000

ASSIGNOR:

YAO, STEVE

DOC DATE: 05/29/2000

ASSIGNOR:

WU, CHI

DOC DATE: 05/31/2000

ASSIGNEE:

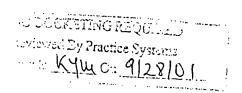
CALIFORNIA INSTITUTE OF TECHNOLOGY 1200 EAST CALIFORNIA BOULEVARD MAIL CODE 201-85 PASADENA, CALIFORNIA 91125

SERIAL NUMBER: 09501824

PATENT NUMBER:

FILING DATE: 02/10/2000

ISSUE DATE:



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06-27-2001



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Attorney Docket No.: 06618-416001 Client's Ref. No.: CIT2939

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& TOLOCHAT			
Commissioner for Patents: Please record the attached original docume	ent(s) or copy(ies).		
Name of conveying party(ies):	Name and address of receiving party(ies):		
Vladimir Iltchenko, Lute Maleki, Steve Yao and	CALIFORNIA INSTITUTE OF TECHNOLOGY		
Chi Wu	1200 East California Boulevard		
Additional name(s) attached? Yes ANO	Mail Code 201-85		
3. Nature of conveyance:	Pasadena, CA 91125		
☑ Assignment MAR 1 1 2003 등	GO " PA CO		
☐ Merger	10/10		
☐ Security Agreement ☐ Change of Name			
□ Other:	JA.		
Execution Date: 5/9/2000; 5/29/2000 and 5/31/2000	CALIFORNIA INSTITUTE OF TECHNOLOGY 1200 East California Boulevard Mail Code 201-85 Pasadena, CA 91125 Additional names/addresses attached? Yes		
Application number(s) or patent number(s):			
If this document is being filed with a new application, the execution	date of the application is:		
A. Patent Application No(s).:	B: Patent No(s).:		
09/501,824			
Additional numbers attached? ☐ Yes ☒ No			
5. Name/address of party to whom correspondence concerning	Total number of applications/patents involved: 1		
document should be mailed:	o. Total number of applications/paterns involved.		
SCOTT C. HARRIS	7. Total fee (37 CFR §3.41): \$40		
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San Diego, CA 92122	8. Deposit Account No.: 06-1050		
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9. Statement and Signature: To the best of my knowledge and belief, the foregoing information is true and correct and			
any attached copy is a true copy of the original document			
· //	,		
Scott C. Harris	1/12/01		
Reg. No. 32,030	6/10/0/		
Name of Person Signing Signature	Date		
Total	number of pages including coversheet, attachments and document: 5		
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June 12, 2001

Date of Deposit

Jere Halligan
Typed Name of Person Signing Certificate

Attorney's Docket No.: 06618/416001/CIT 2939

ASSIGNMENT

For valuable consideration, we, VLADIMIR ILTCHENKO of Pasadena, CA, LUTE MALEKI of Pasadena, CA, STEVE YAO of Diamond Bar, CA, CHI WU of San Marino, CA, hereby assign to CALIFORNIA INSTITUTE OF TECHNOLOGY, a California corporation having a place of business at: 1200 East California Boulevard, Mail Code 201-85, Pasadena, CA 91125, and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title and interest throughout the world in the inventions and improvements which are subject of an application for United States Patent signed by us this day, entitled COUPLING SYSTEM TO A MICROSPHERE CAVITY, filed February 10, 2000, and assigned U.S. Serial Number 09/501.824, and we authorize and request the attorneys appointed in said application to hereafter complete this assignment by inserting above the filing date and serial number of said application when known; this assignment including said application, any and all United States and foreign patents, utility models, and design registrations granted for any of said inventions or improvements, and the right to claim priority based on the filing date of said application under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes; and we authorize the Assignee to apply in all countries in our name or in its own name for patents, utility models, design registrations and like rights of exclusion and for inventors' certificates for said inventions and improvements; and we agree for ourselves and our respective heirs, legal representatives and

assigns, without further compensation to perform such lawful acts and to sign such further applications, assignments, Preliminary Statements and other lawful documents as the Assignee may reasonably request to effectuate fully this assignment.

DATE: 5/9/2000	Bry.
DATE: 3/8/2003	Vladimir Iltchenko
DATE:	Lute Maleki
DATE:	-
· · · · · · · · · · · · · · · · · · ·	Steve Yao
DATE:	

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DATE:	
	Vladimir Iltchenko
n . 75	
DATE:	Lute Maleki
DATE: 5/29/00	Steve Yao
DATE:	-
	Chi Wu



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RECORDATION DATE: 08/27/2001

REEL/FRAME: 012115/0428

NUMBER OF PAGES: 4

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

MALEKI, LUTFOLLAH

DOC DATE: 07/31/2001

ASSIGNOR:

YAO, XIAOTIAN S.

DOC DATE: 08/17/2001

ASSIGNOR:

ILCHENKO, VLADIMIR

DOC DATE: 08/22/2001

ASSIGNEE:

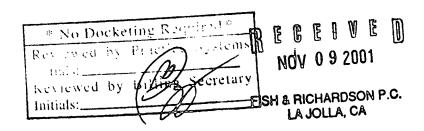
CALIFORNIA INSTITUTE OF TECHNOLOGY 1200 EAST CALIFORNIA BOULEVARD PASADENA, CALIFORNIA 91125

SERIAL NUMBER: 09816872

PATENT NUMBER:

FILING DATE: 03/22/2001

ISSUE DATE:



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08-31-2001

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Substitute Form PTO-1595

Attorney Docket No.: 06618-605001 Client's Ref. No.: CIT 3188

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1. Name of conveying party(ie	95):	Name and address of receiving party(ies):
Lutfollah Maleki, Xiao Ilchenko	otian S. Yao and Vladimir	California Institute of Technology 1200 East California Boulevard Pasadena, CA 91125
Additional name(s) attached? ☐ Yes ☒ No 3. Nature of conveyance:		
■ Assignment	y.2(-3)	California Institute of Technology 1200 East California Boulevard Pasadena, CA 91125 Additional names/addresses attached? Yes
	1, 2001; August 17, 2001; ugust 22, 2001	Additional names/addresses attached? ☐ Yes (1)
4. Application number(s) or pa	atent number(s):	
If this document is being f	filed with a new application, the execu	ition date of the application is:
A. Patent Application No(s 09/816,872	s).:	B: Patent No(s).:
	Additional number	rs attached? □ Yes ৷ No
5. Name/address of party to w document should be mailed	whom correspondence concerning it:	6. Total number of applications/patents involved: 1
SCOTT C. HARRIS		7. Total fee (37 CFR §3.41): \$40
Fish & Richardson P.C. PTO Customer No. 20985	☑ Enclosed ☐ Authorized to charge Deposit Account.	
4350 La Jolla Village San Diego, California		Deposit Account No.: 06-1050 Please apply any additional charges, or any credits, to our Deposit Account No. 06-1050.
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Reg. No. 43,312		August 23, 2001
Name of Person Signing	Signature	Date
		Total number of pages including coversheet, attachments and docum
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2001 DBYRHE 00000073 0981	40.00 DP CERTIFICATE OF MAILING BY FI I hereby certify under 37 CFR §1.8(a) th	IRST CLASS MAIL nat this correspondence is being deposited with the United States Postal Servin the date indicated below and is addressed to the Commissioner of Patents,

ASSIGNMENT

For valuable consideration, we, LUTFOLLAH MALEKI of Pasadena, California, XIAOTIAN S. YAO of Diamond Bar, California, and VLADIMIR ILCHENKO of La Canada, California, hereby assign to: California Institute of Technology, a non-profit corporation having a place of business at: 1200 East California Boulevard, Pasadena, CA 91125; and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title and interest throughout the world in the inventions and improvements which are subject of an application for United States Patent signed by us, entitled NON-SPHERICAL WHISPERING-GALLERY-MODE MICROCAVITY, filed March 22, 2001, and assigned U.S. Serial Number 09/816,872; this assignment including said application, any and all United States and foreign patents, utility models, and design registrations granted for any of said inventions or improvements, and the right to claim priority based on the filing date of said application under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes; and we authorize the Assignee to apply in all countries in our name or in its own name for patents, utility models, design registrations and like rights of exclusion and for inventors' certificates for said inventions and improvements; and we agree for ourselves and our respective heirs, legal representatives and assigns, without further compensation to perform such lawful acts and to sign such further applications, assignments, Preliminary Statements and other lawful documents as the Assignee may reasonably request to effectuate fully this assignment.

Date: 7/31/0/	LUTFOLLAH MALEKI
Date:	
	XIAOTIAN S. YAO
Date:	VLADIMIR ILCHENKO

a 005

Atterney Docket No. 06618-605001/CIT3188

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Date:	
	LUTFOLLAH MALEKI
Date: 8/17/0/	XIAOTIAN S. YAO
Date:	
	VLADIMIR ILCHENKO

Attorney Docket No. 06618-605001/CIT3188

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Date:	LUTFOLLAH MALEKI
Date:	XIAOTIAN S. YAO
Date: 8/22/0/	VLADIMIR ILCHENKO

Attorney's Dack... No.: 06618/416001/CIT 2939

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DATE:	Vladimir Iltchenko
DATE:	Lute Maleki
DATE:	Steve Yao
DATE: 5/31/00	ouls -

Chi Wu



UNITED STATES DEPARTMENT OF COMMERCE Patent and Trademark Office

ASSISTANT SECRETARY AND COMMISSIONER OF PATENTS AND TRADEMARKS Washington, D.C. 20231

FISH & RICHARDSON P.C. LA JOLLA, CA

SEPTEMBER 05, 2001

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SCOTT C. HARRIS FISH & RICHARDSON P.C. 4350 LA JOLLA VILLAGE DRIVE, SUITE 500 DAN DIEGO, CA 92122



06618/591001

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RECORDATION DATE: 06/20/2001

REEL/FRAME: 011925/0555

NUMBER OF PAGES: 2

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

MALEKI, LUTFOLLAH

DOC DATE: 06/07/2001

ASSIGNOR:

YAO, XIAOTIAN S.

DOC DATE: 06/07/2001

ASSIGNOR:

IICHENKO, VLADIMIR

DOC DATE: 06/05/2001

ASSIGNEE:

CALIFORNIA INSTITUTE OF TECHNOLOGY 1200 EAST CALIFORNIA BOULEVARD PASADENA, CALIFORNIA 91125

SERIAL NUMBER: 09792386

FILING DATE: 02/23/2001

PATENT NUMBER:

ISSUE DATE:

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Substitute Form PTO-1595 Attorney Docket No.: 06618-591001 Client's Ref. No.: CIT- 3160

MIN O R

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Commissioner for Patents: Please record the attached original docum	ent(s) or copy(ies).
Name of conveying party(ies):	2. Name and address of receiving party(ies):
Lutfollah Maleki, Xiaotian S. Yao and Vladimir	CALIFORNIA INSTITUTE OF TECHNOLOGY
Ilchenko	1200 East California Boulevard
Additional name(s) attached? 🗆 Yes 🖫 No Ë 🤟	Pasadena, CA 91125
3. Nature of conveyance:	<u>-</u>
☑ Assignment ☐ Merger MAR 1 1 2003	
☐ Merger ☐ Security Agreement	∳
☐ Change of Name	1
□ Other:	}
Execution Date: 06/07/01; 06/07/01; 06/05/01	Additional names/addresses attached? ☐ Yes ☒ No
Application number(s) or patent number(s):	
If this document is being filed with a new application, the execution	n date of the application is:
A. Patent Application No(s).:	B: Patent No(s).:
09/792,386	
Additional numbers a	ıttached? □ Yes থ No
Name/address of party to whom correspondence concerning document should be mailed:	6. Total number of applications/patents involved: 1
SCOTT C. HARRIS	7. Total fee (37 CFR §3.41): \$40
Fish & Richardson P.C.	☑ Enclosed
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	8. Deposit Account No.: 06-1050
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9 Statement and Signature: To the best of my knowledge and	d belief, the foregoing information is true and correct and
any attached copy is a true copy of the original documer	
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33	7 30 300
Scott C. Harris	BING AI Jane 20, 200
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I hereby certify under 37 CFR §1.8(a) that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage on the date indicated below and is addressed to the Commissioner of Patents, Washington, D.C. 20231.

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ASSIGNMENT

For valuable consideration, we, <u>LUTFOLLAH MALEKI</u> of <u>Pasadena</u>, <u>California</u>, XIAOTIAN S. YAO of Diamond Bar, California, VLADIMIR ILCHENKO of La Canada, California, hereby assign to: California Institute of Technology, a non-profit corporation having a place of business at: 1200 East California Boulevard, Pasadena, CA 91125; and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title and interest throughout the world in the inventions and improvements which are subject of an application for United States Patent signed by us, entitled FIBER-COUPLED MICROSPHERE LASER, filed February 23, 2001, and assigned U.S. Serial Number 09/792,386, and we authorize and request the attorneys appointed in said application to hereafter complete this assignment by inserting above the filing date and serial number of said application when known; this assignment including said application, any and all United States and foreign patents, utility models, and design registrations granted for any of said inventions or improvements, and the right to claim priority based on the filing date of said application under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes; and we authorize the Assignee to apply in all countries in our name or in its own name for patents, utility models, design registrations and like rights of exclusion and for inventors' certificates for said inventions and improvements; and we agree for ourselves and our respective heirs, legal representatives and assigns, without further compensation to perform such lawful acts and to sign such further applications, assignments, Preliminary Statements and other lawful documents as the Assignee may reasonably request to effectuate fully this assignment.

Date: 6/07/0

Date: 5/07/6/

Date: 6/5/01

Lutfallah Malala

Xiantian S. Van

Vladimir Iltchenko